

Plastverarbeiter

Article

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Biologically properly

PET bottles and beans - this is a Canadian company is in the production of Vehreo, an environmentally friendly synthetic leather, which can be used with car seats, door covers and dashboards. Vehreo consists among other things made from recycled PET bottles. Biomaterials, such as replacing vegetable oils, which are made from soy and castor beans, traditional phthalate plasticizers.

PET | Plastic Recycling | PVC | Leather

Vehreo meets the stringent requirements of OEMs such as Toyota. This has been successfully tested under production conditions, "Dr. Horst Noglik, Senior Scientist, Advanced Technology said at Canadian General-Tower Ltd.. The company is headquartered in Cambridge, in the Canadian province of Ontario produces the new synthetic leather. "To date we have for testing approximately 5,000 m run through the production lines. In mass production, to start in 2013, is our long-term goal about five million meters per year. then we can process about 6.5 million recycled bottles a year. "At the end of the automotive life cycle which covers land-Vehreo then not at the dump, but can be without quality loss and re-use process.

Long corporate tradition is linked to the green revolution

"We just reinvent ourselves again," said Patrick Diebel, vice president of Advanced Technology at Canadian General-Tower (CGT) and head of the development team of Vehreo. And not for the first time: Canadian General Tower (CGT), which in the sixties of the 19th Century was founded, initially put forth rubber flooring for wagon wheels. At the beginning of the 20th Century, the company then went on to the production of coated materials, for example, raincoats and shower curtains. Today the company is the world's largest manufacturer of liners for swimming pools.

For more than 80 years, CGT is also active as a supplier to the automotive industry. About 85% of all passenger cars and light trucks produced in North America use the materials of the company in the vehicle seats, head-and armrests, as well as in the dashboard and door panels. Says "Many customers see no difference between our product and genuine leather," Diebel. "The seat covers are just as high quality and comfortable."

Increasing environmental awareness and the long-term decline in global oil inventories were the main reasons for the Canadian company, new manufacturing processes for synthetic materials such as artificial leather to be developed. The original oil-based production process is purely biological in Vehreo now. Three years of research and numerous attempts were needed before the production process was perfected.

The Ontario Bioauto Council supported the project with a research grant of more than 545 000 " (750,000 Canadian dollars). "The program aims to develop research results into marketable products quickly," says Diebel.

Sustainable mix determines the production process

The Vehreo platform consists of five layers: the upper surface of the paint, a polyurethane matrix with soy or corn protein wastes from food production. The underlying layer is a PVC-grained skin, consisting of PVC polymer, plasticizers plant derived from the oil of soy and castor beans, and additives. In the middle is PVC foam, again with vegetable plasticizers. This is followed by a fourth layer of adhesive - PVC / VA copolymers and plasticizer plant. The last layer is a textile fabric made of 55% recycled PET bottles and litter.

Customers have two versions of artificial leather are available, differing in their overall share of organic and recycled materials - either 32% or 52%. "Of course we try to share the organic and recycled materials to maximize. But this is also a cost issue at the moment. Currently Vehreo is still slightly more expensive than regular PVC seat covers, but it is significantly below the price of polyurethane or leather," explains Dr. Noglik.

As much as Vehreo different from conventional artificial leather - almost everything in the production process remains the same. "It was important to us that we can use our machinery and equipment," said the native of Hamburg Noglik, who has lived for more than 20 years in Canada. First, the Vehreo skin is produced by four Kalandarwalzen. During the subsequent intaglio printing process, several coatings and surface modifications of paint possible. Then the PVC plastisol to foam and adhesives are manufactured by order stations. Finally Vehreo is imprinted with the custom texture.

Environmentally friendly product will be awarded

The environmental commitment of the company attracted some attention: In November 2010, received the Innovation Award of the CGT Network of Automotive Excellence (NoAE) for the breakthrough with Vehreo. The NoAE is an enterprise-wide network of experts for the automotive and supplier industry. The initiative aims to promote cooperation between businesses and thus increase their competitiveness. One month before receiving the award was Diebel was a CGT-team a guest at the 2010 International Suppliers Fair (IZB) in Wolfsburg, the host country Canada. As a result of the brief visit was Diebels order book packed full of CGT is to provide conventional artificial leather at VW plants in Mexico, India and China. The total volume of new orders amounted to nearly 24 million euros (32.5 million Canadian dollars).

German OEMs are the very top of Canada's Wishlist

The existence of co-operation with VW owes, according to Diebel CGT and the Ontario government, in particular, Sandra Pupatello, Minister for

Economic Development and Trade. "It was a great ambassador for Canada and Ontario," says Diebel.

The collaboration with Volkswagen underscores the desire of Canadian suppliers to want to cooperate more closely in future with German OEMs. Two German OEMs are particularly in focus, said Steve Rodgers, president of the Association of Canadian suppliers APMA (Automotive Parts Manufacturers' Association): "Volkswagen is strongly committed to the growth in North America. BMW has also committed himself and procured components and systems in North America to support both North American and European works. This is for the Canadian supplier of course of great interest. "

Good economic prospects through restructuring and new product

Patrick Diebel looks ahead to the future. He assumes that CGT will achieve by 2013 annual sales of around " 220 million (300 million Canadian dollars). This corresponds to the revenue level of CGT, before the recession has swept across the North American auto sector. "But with the changes we had to make, we are now more profitable than before," says Diebel.

CGT currently has around 500 employees, almost all of whom work at the company headquarters and main factory in Cambridge, about 80 km west of Toronto. In Mexico City, and Detroit, the company employs sales personnel in China will soon open a second production CGT system for conventional artificial leather. And if that interest continues to Vehreo from the auto manufacturer, it could also arrive Diebels future forecasts.

At a glance

The Ontario Council Bioauto

The Ontario Bioauto Council, based in Guelph, Ontario, is an industry-led nonprofit organization. Founded in 2007, it linked the chemical, plastics and automotive industries, agriculture and forestry as well as universities and research institutions. The aim is that research results into marketable to develop products based on biomaterials, such as auto parts, and thus to strengthen the global competitiveness of the manufacturing sector in Ontario. For the promotion of research projects, the provincial government, the Council Ontario Bioauto a fund with a volume of around 4.3 million euros (six million Canadian dollars) made available.

At a glance

The Canadian province of Ontario

The province of Ontario is the economic engine of Canada, the world's second largest state. Approximately 37% of Canada's gross domestic product is generated in the most populous Canadian province (12.9 million of the 33.3 million residents of Canada). Nearly half of all Canadian exports now come from the provinces, Ontario is responsible for 60% of all imports, which belongs to the North American Free Trade NAFTA. Germany is on the sixth most important bilateral trading partner, Ontario.

The "Ministry of Economic Development and Trade," with Sandra Pupatello Minister at the head of Ontario strengthens the business location for foreign investors through strategic investment programs.

Since March 2008, innovative and environmentally friendly operating companies apply for funds from all sectors of the approximately 730 million euros (1.15 billion Canadian dollars) heavy promotion program "Next Generation of Jobs Fund" with the provincial government of Ontario. The adopted in May 2009 "Green Energy Act" will strengthen the leadership role of the province in the area of renewable energies.

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